

ABSTRACT OF THE DISCLOSURE

A motor-driven gear pump assembly includes a rotary shaft rotatably mounted in a housing, and a pump mounted on the rotary shaft. The pump has a pressure chamber. A high-pressure seal is disposed around the shaft between the pump and the motor. A low-pressure seal is provided around the shaft between the high-pressure seal and the motor. An annular oil seal chamber is formed between the high-pressure seal and the low-pressure seal to surround the shaft. A recess chamber is formed around the oil seal chamber. Oil is introduced into the oil seal chamber until the portion of the rotary shaft in the oil seal chamber is completely submerged in the oil introduced while leaving air in the oil seal chamber. The oil in the oil seal chamber thus serves as a seal which positively prevents infiltration of air into the pump. If oil in the pump leaks through the high-pressure seal into the oil seal chamber, the air is compressed, thus absorbing any increase in the volume of oil.